

## TENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

10 Rec'd PCT/US 08 SEP 2004

To:  
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PCT

## WRITTEN OPINION

(PCT Rule 66)

3/17/04 Reminded  
4/8/04 Resp Due

|  |  |  |  |
|--|--|--|--|
|  |  | Date of Mailing<br>(day/month/year)                              | 03 MAR 2004  |
| Applicant's or agent's file reference<br><br>287.00040201  |  | REPLY DUE  | within 1 months/days from<br>the above date of mailing |
| International application No.<br><br>PCT/US03/06969  | International filing date (day/month/year)<br><br>07 March 2003 (07.03.2003) | Priority date (day/month/year)<br><br>08 March 2002 (08.03.2002) |  |
| International Patent Classification (IPC) or both national classification and IPC<br><br>IPC(7): C09D 163/00, 5/44; C08L 63/00 and US Cl.: 523/402, 406, 409, 412, 414 |  |  |  |
| Applicant<br><br>VALSPAR SOURCING, INC.  |  |  |  |

DKT  
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1. This written opinion is the first (first, etc.) drawn by this International Preliminary Examining Authority.
2. This opinion contains indications relating to the following items:
  - I  Basis of the opinion
  - II  Priority
  - III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV  Lack of unity of invention
  - V  Reasoned statement under Rule 66.2 (a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - VI  Certain documents cited
  - VII  Certain defects in the international application
  - VIII  Certain observations on the international application
3. The applicant is hereby **invited to reply** to this opinion.
 

**When?** See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension. See rule 66.2(d).

**How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also** For an additional opportunity to submit amendments, see Rule 66.4. For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis. For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.
4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 08 July 2004 (08.07.2004).

|   |  |                                      |
|---|--|--------------------------------------|
| Name and mailing address of the IPEA/US<br><br>Mail Stop PCT, Attn: IPEA/US<br>Commissioner for Patents<br>P.O. Box 1450<br>Alexandria, Virginia 22313-1450<br>Facsimile No. (703) 305-3230 | Authorized officer<br><br>Jeffrey B. Robertson<br>Telephone No. (703) 308-0661 | Jean Proctor<br>Paralegal Specialist |
|---|--|--------------------------------------|

Form PCT/IPEA/408 (cover sheet)(July 1998)

## WRITTEN OPINION

International Application No.

PCT/US03/06969

**I. Basis of the opinion**

## 1. With regard to the elements of the international application:\*

- the international application as originally filed  
 the description:

pages 1-20 \_\_\_\_\_, as originally filed  
 pages NONE \_\_\_\_\_, filed with the demand  
 pages NONE \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

- the claims:

pages 21-24 \_\_\_\_\_, as originally filed  
 pages NONE \_\_\_\_\_, as amended (together with any statement) under Article 19  
 pages NONE \_\_\_\_\_, filed with the demand  
 pages NONE \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

- the drawings:

pages NONE \_\_\_\_\_, as originally filed  
 pages NONE \_\_\_\_\_, filed with the demand  
 pages NONE \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

- the sequence listing part of the description:

pages NONE \_\_\_\_\_, as originally filed  
 pages NONE \_\_\_\_\_, filed with the demand  
 pages NONE \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).  
 the language of publication of the international application (under Rule 48.3(b)).  
 the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:

- contained in the international application in printed form.  
 filed together with the international application in computer readable form.  
 furnished subsequently to this Authority in written form.  
 furnished subsequently to this Authority in computer readable form.  
 The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
 The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4.  The amendments have resulted in the cancellation of:

- the description, pages NONE \_\_\_\_\_  
 the claims, Nos. NONE \_\_\_\_\_  
 the drawings, sheets/fig NONE \_\_\_\_\_

5.  This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed."

**WRITTEN OPINION**International application No.  
PCT/US03/06969**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. STATEMENT**

|                               |                               |     |
|-------------------------------|-------------------------------|-----|
| Novelty (N)                   | Claims <u>9,10,18</u>         | YES |
|                               | Claims <u>1-8,11-17,19-29</u> | NO  |
| Inventive Step (IS)           | Claims <u>9, 10, 18</u>       | YES |
|                               | Claims <u>1-8,11-17,19-29</u> | NO  |
| Industrial Applicability (IA) | Claims <u>1-29</u>            | YES |
|                               | Claims <u>NONE</u>            | NO  |

**2. CITATIONS AND EXPLANATIONS**

Claims 9,10, and 18 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest reacting the residual epoxy groups after forming the dispersion or after the polymerization of the reactive diluent. The art also does not teach or suggest adding more reactive diluent prior to the polymerization.

Claims 1-29 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

----- NEW CITATIONS -----  
US 5,908,902 A (PFEIL et al.) 01 June 1999, see column 13, lines 13-61.

**Supplemental Box**  
(To be used when the space in any of the preceding boxes is not sufficient)**TIME LIMIT:**

The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Examination Report.

**V. 2. Citations and Explanations:**

Claims 1, 3, 6, 11-14, 16, 17, and 19-29 lack novelty under PCT Article 33(2) as being anticipated by Pfeil et al. (U.S. Patent No. 5,908,902).

For claims 1 and 19, in column 4, line 15 to column 5, line 3, Pfeil teaches an aqueous dispersion containing an epoxy compound (A-1), a modifying compound (A-3), and a reactive diluent component (C-2), where component (C-2) is a functional monomer capable of free-radical polymerization. In column 7, lines 31-50, Pfeil teaches that the modifying compound is an amine such as ethylene diamine. The amine groups react with the epoxide groups of component (A-1) leading to an advanced molecular weight compound. In column 13, lines 13-61, Pfeil teaches a preparation process for the dispersions where the monomer component (C-2) is polymerized after dispersion in water. Here, for claims 22, 23, and 24, Pfeil teaches that the diluent is added to the resin material , where solvent-free dispersions may be made. In this case, the epoxy material is dispersed or dissolved in the reactive diluent, and there would be no volatile organic compound content.

For claim 3 and 14, in column 11, lines 4-9, Pfeil teaches the addition of water-soluble acid that functions as a curing agent.

For claims 6, 11, 16, and 27, in column 9, lines 54-67, Pfeil discloses that hardeners typically used for epoxy resins are added, which indicates that there are still epoxy groups present after the reaction of the starting resin with the amines.

For claims 12 and 13, in column 8, lines 31-56, Pfeil teaches the addition of surfactants. Since the surfactants are added to assist the dispersion of the epoxy resins, and the acids are added as curing agents, the surfactants would be added prior to the addition of the curing agent.

For claim 17, in column 9, lines 32-36, Pfeil discloses that multifunctional reactive diluents are used.

For claim 20, in column 9, lines 37-53, Pfeil teaches the addition of a solvent.

For claims 21, 25, 26, 28, and 29, in column 17, lines 1-53, Pfeil teaches that the coatings have anticorrosive properties and are applied to articles. The coatings are described as being suitable for electrodeposition coating and may be cured by heating.

Claims 1-6, 11-15, 17,19-22 and 25-29 lack novelty under PCT Article 33(2) as being anticipated by Neumann et al. (U.S. Patent No. 5,932,636).

For claim 1, in column 2, lines 38-52, Neumann teaches the preparation of a dispersion containing an epoxy-amine adduct and a monomer such as styrene. The epoxy-amine adduct is added to the monomer and the monomer is converted to a polymer through emulsion or suspension polymerization. In column 6, lines 9-12, Neumann teaches enlargement of the molecule when an epoxy resin is reacted with an amine.

For claim 2, in column 12, lines 23-35, Neumann teaches that the amine epoxy adduct is formed in the presence of styrene, where for claim 5, the epoxy material is dissolved in reactive diluent.

For claim 3, in column 3, lines 12-13, Neumann teaches the addition of acids.

For claim 4, in column 4, lines 1-10, Neumann teaches the reaction of bisphenol A with epichlorohydrin. For claim 6, in column 7,

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

lines 5-6, Neumann teaches that a slight excess of epoxy groups is advantageous.

For claims 11 and 27, Neumann teaches the addition of a crosslinker in column 10, lines 40-52.

For claims 12 -14, in column 13, Table 3, Neumann, teaches the addition of dodecylmercaptan, a surfactant. In column 13, lines 7-15, Neumann teaches that the surfactant is added prior to the addition of aqueous acid. For claim 15, here it is also taught that Neumann adds the aqueous acid prior to the dispersion in deionized water.

For claim 19, in column 11, lines 11-21, Neumann sets forth the free radical conditions through which the monomer is polymerized.

For claims 20 and 22, in column 12, lines 64-67, Neumann teaches that the dispersions contain solvents, which are removed, indicating that the coating composition is substantially solvent free.

For claims 21, 25, 26, 28, and 29, in column 11, lines 33-35, Neumann teaches that the compositions are used as electrodeposition coating materials where corrosion preventing pigments may be added. In column 13, lines 41-52, Neumann teaches a coating procedure where the composition is applied to a panel and cured through heating.

Claims 1, 6-8, 19, 20, 21, 25, 26, and 29 lack novelty under PCT Article 33(2) as being anticipated by Bremser et al. (U.S. Patent No. 6,201,043).

For claim 1, in column 2, lines 43-61, Bremser teaches the polymerization of an ethylenically unsaturated monomer in an aqueous solution of epoxy-amine adduct. For claims 6-8, in column 4, lines 11-21, Bremser teaches that the epoxy-amine adducts have residual epoxy groups that are reacted with amines, an active hydrogen compound. This is done prior to forming the aqueous dispersion.

For claim 19, in column 6, lines 63-66, Bremser teaches that free-radical reactions are used to polymerize the reactive diluent.

For claim 20, in column 8, lines 36-53, Bremser teaches the addition of solvents.

For claims 21, 25, 26, and 29, in column 3, lines 16-62, Bremser teaches that the coatings are useful as electrodeposition coatings having corrosion resistance when coated on an article.

**----- NEW CITATIONS -----**

US 5,908,902 A (PFEIL et al.) 01 June 1999, see column 13, lines 13-61.